AMENDMENTS TO THE CLAIMS

1-6   **(canceled)**

7.   **(new)** A self-addressing control unit system for controlling a sequence of
or an array of display signs comprising:

   a) a plurality of control units each associated with a portion of the display
   sign array and all electrically interconnected by a physical or logical
   parallel electrical bus having multiple connections, wherein said bus
   transfers data or power between the control units;

   b) a master or remote controller electrically interconnected with the
   plurality of control units by the bus;

   c) a communication device associated with the master or remote
   controller for communicating a signal to the plurality of control units
   along the bus;

   d) a transmission receiver within each of the plurality of control units that
   receives an address from a previous control unit;

   e) a calculator or computer within each of the plurality of control units
   wherein the address for that control unit is computed by performing a
   mathematical operation that changes the address received from the
   previous control unit;

   f) memory storage within each of the plurality of control units wherein the
   address of that control unit is stored internally within the control unit;
   and,

   g) a transmitter within each of the plurality of control units that sends its
   address to a next control unit;

   whereupon when one of said plurality of control units fails, a new or
      replacement control unit will be installed and automatically re-
      address itself in the system by receiving an initial address from a
      previous or prior control unit, performing the mathematical
      operation on that initial address to produce a new address, and
      storing that new address in the memory as its newly present
      address in the control unit.

8. **(new)** The system of claim 7 wherein the mathematical operation comprises adding a constant to the initial address to produce the new address.

9. **(new)** The system of claim 8 wherein the constant is one.

10. **(new)** The system of claim 7 wherein each control unit includes a non-volatile memory in which it stores its address.

11 **(new)** The self-addressing control unit system of claim 7 wherein the master or remote controller:

- transmits an initial address to the first of the plurality of control units on a first global transmission line of the bus;

- transmits data on a second global transmission line of the bus;

- separates data transmission into parts, each part being a packet of data;

- assigns an address to each packet of data, wherein each said assigned address represents the address of the control unit that will process that packet of data; and,

- retrieves packets of data on a third global transmission line of the signal bus from any one of the plurality of control units by specifying its address on the second transmission line.

12. **(new)** The self-addressing control unit system of claim 11 further comprising a transmitter that sends data packets from every control unit to a key module over the third transmission line when the address of that control unit is specified by the key module.

13. **(new)** The system of claim 11 wherein each control unit has a feedback line to every other control unit.

14. **(new)** A self-addressing control unit

- that is associated with a portion of a display sign sequence or array, and
- used in a self-addressing control unit system for controlling the sequence or array,
- said system having a plurality of control units interconnected by a physical or logical parallel electrical bus having multiple connections,
- wherein said bus transfers data or power between the plurality of control units,

said control unit comprising:

a) a transmission receiver that receives an address from a first other control unit in the system;

b) a calculator or computer that computes a new address for the control unit by performing a mathematical operation that changes the address received from the first other control unit;

c) memory storage that stores its new address of the control unit; and,

d) a transmitter that sends its new address to a second other control unit.

15. **(new)** The control unit of claim 14 wherein the mathematical operation comprises adding a constant to the address received from the first other control unit to produce its new address.

16. **(new)** The control unit of claim 14 wherein the constant is one.

17. **(new)** The system of claim 13 wherein the control units look to the second global transmission line for an address and read a block of data that is specifically associated with its address.

18. **(new)** A method of networking a plurality of self-addressing control units for controlling a sequence of or an array of display signs comprising:

a) providing a plurality of control units each containing storage memory and each associating with a portion of the display sign array and all electrically interconnecting by a physical or logical parallel electrical bus having multiple connections, wherein said bus transfers data or power between the control units;

b) providing a master or remote control electrically interconnecting with the plurality of control units by the bus;

c) communicating with the master or remote controller for communicating a signal to the plurality of control units along the bus by sending a system start-up signal from the controller to the plurality of control units;

d) causing each control unit to calculate an address associated with that control unit by receiving an initial address from a first other control unit, performing a mathematical operation on that address to create a new address, storing the new address in its memory, and transmitting the new address to a second other control unit; and

e) re-addressing whereupon one of said plurality of control units fails, a new or replacement unit will be installed and automatically re-address itself in the system by receiving an initial address from a previous or prior control unit, performing the mathematical operation on that initial address to produce a new address, and storing that new address in the memory as its newly present address in the control unit system.